



Return on Investments

Carbide Recycling

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What You Need To Know

Tungsten carbide is ideal for recycling.

Recyclers are paying about \$5 to \$10 a pound for tungsten carbide.

Learn tips for separating tungsten carbide from other metals.

One person's waste is another's valuable renewable resource.

If there's one thing metalworkers can agree on, it's "waste not, want not," especially when it comes to tungsten carbide. Whether in gray powder form as raw feed supply, as scrap or as tools, tungsten carbide is one of the most valuable metals, but many machine shops have it just lying around on their shelves.

Tungsten carbide, or the combination of carbon and tungsten elements, has become increasingly popular because of its durability and malleability. It has a hardness second only to a diamond and a strength more intense than steel, but it can be easily molded into different shapes and forms. It is used for cutting and mining tools, mill products, surgical tools, sporting equipment and now even jewelry, particularly wedding bands.

These attributes make tungsten carbide scrap one of the best contenders for recycling. Doing so will help your company's bottom line, advance your sustainability goals and protect U.S. manufacturers from volatile foreign prices (less than 10 percent of the world's tungsten is found here).

Sound promising? Here are answers to some burning questions about tungsten carbide to help you start reaping its valuable benefits.

Where is tungsten carbide in machine shops?

Tungsten carbide is found in inserts, reamers, drills, boring bars, round tooling and end mills. It's also in ballpoint pens, punches and dies, says Don Graham, manager of education and technical services at Seco Tools.

How much is tungsten carbide worth?

As a ballpark estimate, Tim Diehl, global carbide recycling manager at Kennametal, says it would take about two weeks for a machine shop with 10 tools to recycle a full, one-gallon paint pail of tungsten carbide. He says recyclers are paying machine shops \$5 to \$10 a pound for tungsten carbide recyclable metal this year.

What does recycling tungsten carbide do for the environment?

In addition to earning money, machine shops can also contribute to their environmental sustainability goals by recycling. Diehl says Kennametal's recycling activities advance its corporate sustainability practices, which it plans to put in place throughout its international organization.

Why is it strategically important for companies to recycle tungsten carbide?

The price of tungsten can be volatile, Graham says. Because tungsten carbide also contains cobalt, which has had price fluctuations because of international conflicts, both cobalt and tungsten are recycled regularly in the United States. Companies refine tungsten into a powder form and use it to manufacture new products. Similarly, they remove cobalt from machine tools and reuse it industrially.

How can you separate tungsten carbide tools for recycling?

To learn how to identify and separate tungsten carbide inserts, reamers, drills, boring bars, round tooling and end mills from similar steel products for recycling, consider the following: Tungsten carbide is always going to be **heavier than steel**, and it has slightly magnetic properties. It's also scratch-resistant and doesn't rust.

Need to make connections for buying and selling carbide?

If you're selling scrap carbide or want to buy, you can post a message on our Forum or reply to another member. Logging in is easy, use your MSCdirect.com credentials. If you don't have an MSC account, you can register quickly and easily. Get started by visiting the Forum on ***carbide recycling here***.